IN THE SPECIFICATION:

Please amend the paragraph beginning on page 4, line 25 as follows:

As has already been described, the operation of the localization method according to the invention is fast and reliable so that the position of the catheter can be continuously determined while the catheter is being advanced in a blood vessel. The entire course of the blood vessel in the body of the patient can thus be reproduced, without necessitating imaging steps and image reconstruction steps that require much calculation work. The intensity of the magnetic resonance signal is proportional to the spin density in the vicinity of the microcoil. The spin density itself is determined essentially by the amount of blood present at the position of the microcoil. The blood volume at the relevant location is reduced in the presence of a stenosis restricting the blood vessel. This leads to a reduced intensity of the magnetic resonance signal. The intensity of the magnetic resonance signal thus constitutes a simple indicator for determining the volume of the blood vessel so as to trace stenoses. Because the signal intensity is represented ~~as a function of~~ in association with the catheter position in the blood vessel, the presence of vessel constrictions and their exact location within the patient are made directly visible. It

follows directly from the foregoing that the microcoil used should be constructed in such a manner that the spatial sensitivity range corresponds approximately to the diameter of human blood vessels. For the diagnosis of large vessels, therefore, the microcoil should be capable of dealing with a volume of a few millimeters.

Please amend the paragraph beginning on page 6, line 12 as follows:

This object is achieved by a diagnostic magnetic resonance imaging method for imaging the surroundings of an interventional instrument provided with a microcoil in that a localization sequence, preferably as described herein before, is applied in alternation with a sequence of RF pulses and gradient pulses that is intended for imaging, the parameters of the imaging sequence that determine the volume to be imaged, that is, the so-called field of view (FOV), being predetermined by the position of the interventional instrument that has been determined by way of the localization method, so that an image of the surroundings of the interventional instrument is formed. It is noted that the technical measure of the alternation of the localization sequence and the sequence of RF pulses and gradient pulses that is intended for imaging can be applied independently of the

particular localization sequences described above ~~set forth in Claims 1 or 2~~.

Please amend the paragraph beginning on page 11, line 30 as follows:

A magnetic resonance system as shown in Fig. 5 is suitable for carrying out the method in accordance with the invention. It includes a coil 17 for generating a steady, uniform magnetic field, gradient coils 18, 19 and 20 for generating gradient pulses in the x, the y and the z direction, and an RF transmission coil 21. The temporal succession of the gradient pulses is controlled by ~~means of~~ a control unit 23 which communicates with the gradient coils 18, 19 and 20 via a gradient amplifier 24. Furthermore, the control unit is connected to the transmission coil 21 via an RF transmission amplifier 22, so that powerful RF pulses can be generated. The system also includes a reconstruction unit 25 in the form of a microcomputer [[25]] as well as a visualization unit [[16]] which may be a graphic monitor 26. The microcoil 6 is provided on the tip of the catheter 1 that is inserted into the patient 5. The microcoil 6 is connected, via the catheter 1, to a receiving unit 27 via which the detected signals are possibly demodulated and applied to the reconstruction unit 25. In the reconstruction unit 25, the spin resonance signals are subjected to Fourier analysis so that

the microcoil 6 can be localized while taking into account the applied gradients. The calculated position of the catheter 1 is then displayed on the monitor 26, possibly as shown in [[the]] Figs. 3 and 4. The reconstruction unit 25 is connected to the control unit 23 so that the position data determined for the imaging method in accordance with the invention can possibly be used for further purposes.

Please amend the Abstract of the Disclosure as follows:

ABSTRACT:

~~The invention relates to an~~ An interventional magnetic resonance method and apparatus utilizing a ~~microcoil. The method enables~~ microcoil which enable localization of an interventional instrument by ~~detection of~~ detecting magnetic resonance signals from the surroundings of the microcoil under the influence of magnetic field gradients. The outstanding reliability and the high speed of the method are due to the application of spatially non-selective RF pulses in conjunction with a sequence of gradient pulses in non-colinear directions. The localization method can be used inter alia for angiography wherein the signal intensity is used to determine the amount of blood present in the blood vessel. ~~The invention also relates to a magnetic resonance~~

~~apparatus for carrying out the method.~~

~~Fig. 5~~